Betula papyrifera / Diervilla lonicera - (Abies balsamea) Forest

COMMON NAME Paper Birch / Bush-honeysuckle - (Balsam Fir) Forest

SYNONYM Paper Birch / Fir Forest

PHYSIOGNOMIC CLASS Forest (I)

PHYSIOGNOMIC SUBCLASS Deciduous forest (I.B)
PHYSIOGNOMIC GROUP Cold-deciduous forest (I.B.2)
PHYSIOGNOMIC SUBGROUP Natural/Semi-natural (I.B.2.N)

FORMATION Montane or boreal cold-deciduous forest (I.B.2.N.b)
ALLIANCE BETULA PAPYRIFERA FOREST ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM TERRESTRIAL

RANGE

Isle Royale National Park

This community mostly occurs in the central part of the island in old burn areas, as well as at some sites in the northeast end of the park.

Globally

This community is found in northern Michigan, northern Minnesota, southern Manitoba, and Ontario.

ENVIRONMENTAL DESCRIPTION

Isle Royale National Park

This community occupies gentle to somewhat steep slopes at elevations ranging from 620 to 864 feet.

Globally

This community is found on fresh to moist soils (Hansen *et al.* 1971, Sims *et al.* 1989). In Ontario, stands occur on coarse textured, non-calcareous mineral soils, at times very shallow (<15 cm). The soil texture is typically coarse loam or sandy loam (Sims *et al.* 1989).

MOST ABUNDANT SPECIES

Isle Royale National Park

StratumSpeciesTree canopyBetula papyriferaShort shrubRubus parviflorus

Forb Aster macrophyllus, Aralia nudicaulis

Globally

<u>Stratum</u> <u>Species</u>
Tree canopy <u>Betula papyrifera</u>
Short shrub <u>Diervilla lonicera</u>

Forb Aster macrophyllus, Aralia nudicaulis

CHARACTERISTIC SPECIES

Isle Royale National Park

Betula papyrifera

Globally

Betula papyrifera, Diervilla lonicera, Aster macrophyllus, Aralia nudicaulis

VEGETATION DESCRIPTION

Isle Royale National Park

This paper birch forest is a successional, deciduous forest with a variable physiognomy ranging from open canopy woodlands to closed canopy forest. Canopy cover varies from 60 to 80%. *Betula papyrifera* is the only dominant tree, 50 to 75% cover); *Picea glauca* is often present at less than 5% cover. Cover of tall shrubs varies from 0 to 40%; the most common tall shrubs are *Abies balsamea*, *Corylus cornuta*, and *Picea glauca*, although *A. balsamea* is uncommon in the area burned in 1936. Cover of short shrubs varies from 5 to 80% cover; the most abundant short shrubs are *Rubus parviflorus* and *Diervilla lonicera*, and seedlings, saplings, or browsed scrub of *Abies balsamea*. Herbaceous cover varies from 40 to 80% cover; the most abundant herbs are *Aster macrophyllus* (25 to 50% cover) and *Aralia nudicaulis* (5 to 25% cover).

USGS-NPS Vegetation Mapping Program

Isle Royale National Park

Globally

The canopy of this forested community is closed to moderately open. Betula papyrifera is the dominant canopy tree and can form nearly pure stands. Populus tremuloides, Abies balsamea, Picea glauca, and, especially in Canada, Pinus banksiana can be found in minor amounts, as well. Tree density can be high, but the growth form and size of the canopy dominants allows significant light to pass through. Abies balsamea is common to dense in the understory (Hansen et al. 1971) and shrubs such as Corylus cornuta, Diervilla lonicera, Rosa acicularis, and Taxus canadensis. The herbaceous layer is similar to other dry-mesic to mesic northern communities. Species found in this layer include Aralia nudicaulis, Aster macrophyllus, Clintonia borealis, Cornus canadensis, Maianthemum canadense, and Trientalis borealis.

OTHER NOTEWORTHY SPECIES

Isle Royale National Park

Information not available.

CONSERVATION RANK G4?.

DATABASE CODE CEGL002463

MAP UNITS 53

COMMENTS

Isle Royale National Park

This successional forest is characteristic of burned sites.

Globally

This type often originates after fires. In the absence of disturbance the community may succeed to *Picea glauca - Abies balsamea* evergreen or mixed evergreen-deciduous community types (MN NHP 1993). Further north in Canada, it may succeed to *Pinus banksiana* and *Picea mariana* upland forests (Sims et al 1989). Paper birch has tiny, light-winged seeds, easily blown long distances by wind. Its bark is very flammable, and even ground fires may kill a mature stem. Birch can resprout from the root collar at the base of the trunk, but not from roots further away from the tree (Heinselman 1996).

REFERENCES

Hansen, H. L., L. W. Krefting, and V. Kurmis. 1974. The forest of Isle Royale in relation to fire history and wildlife. University of Minnesota, Agricultural Exper. Station, Tech. Bull. 294, Forestry Series 13.

Heinselman, M.L. 1996. The Boundary Waters wilderness ecosystem. University of Minnesota Press, Minneapolis, MN. 334 p.

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Sims, R. A., W. D. Towill, K. A. Baldwin, and G. M. Wickware. 1989. Field guide to the forest ecosystem classification for northwestern Ontario. Ontario Ministry of Natural Resources.